Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fuel cell control system for controlling a fuel cell stack constructed by a plurality of individual cells each of which generates an electric power by an electrochemical reaction of hydrogen and oxygen, said fuel cell control system comprising:

output voltage measuring means for measuring output voltages of all or a part of said individual cells; and

diagnosing means for diagnosing said fuel cell stack on the basis of the measured output voltages and their statistics, and for diagnosing at least whether or not an amount of water involved in said fuel cell stack is excessive based on said output voltage and an average voltage of said output voltages, wherein said operation of said fuel cell control system is controlled according to said diagnosis result of said diagnosing means, and

wherein said fuel cell control system calculates the average voltage based on the output voltage of each individual cell measured by the output voltage measuring means and a standard deviation of the output voltages of said individual cells, and

wherein said fuel cell control system causes the amount of water in said fuel cell stack to increase when the average voltage exceeds a predetermined voltage and the standard deviation is within a predetermined range, and causes the amount of hydrogen supplied to said fuel cell stack to increase when the average voltage exceeds the predetermined voltage and the standard deviation is out of the predetermined range.

~~said statistics include an average and standard deviation of said measured output voltages.~~

2. (Canceled)

3. (Previously Presented) The fuel cell control system according to claim 1, wherein said diagnosing means diagnoses that the hydrogen electrode is blocked by water, if said average voltage is within a prescribed range and at least one of said measured output voltages is not within a prescribed range.

4. (Previously Presented) The fuel cell control system according to claim 1, wherein said diagnosing means diagnoses that the electrolyte film is dried, if said average voltage is not within a prescribed range and said standard deviation is within a prescribed range.

5. (Previously Presented) The fuel cell control system according to claim 1, wherein said diagnosing means diagnoses that the hydrogen supply is insufficient, if said average voltage is not within a prescribed range and said standard deviation is not within a prescribed range.

6. (Original) The fuel cell control system according to claim 1, wherein said measured output voltages are traced in time.

7. (Original) The fuel cell according to claim 6, wherein each traced measured output voltage is decomposed into a vibrating component and non-vibrating component.

8. (Previously Presented) The fuel cell control system according to claim 7, wherein said diagnosing means diagnoses that the water supply becomes excessive, if said non-vibrating component becomes decreased and said vibrating component is within a prescribed range.

9. (Previously Presented) The fuel cell control system according to claim 7, wherein said diagnosing means diagnoses that the electrolyte film becomes dried, if said non-vibrating component becomes decreased and said vibrating component is not within a prescribed range.

10. (Previously Presented) The fuel cell control system according to claim 7, wherein said diagnosing means diagnoses that the hydrogen supply becomes insufficient, if said non-vibrating component becomes decreased and a speed drop of said non-vibrating component is greater than a prescribed speed.

11. (Previously Presented) The fuel cell control system according to claim 1, which further comprises temperature measuring means for measuring temperatures of all or a part of individual cells, wherein said diagnosing means diagnoses said fuel cell stack on the basis of statistically estimated output voltages (Vesh, Vesl) of the highest temperature individual cell and lowest temperature individual cell, respectively.

12. (Previously Presented) The fuel cell control system according to claim 11, wherein said diagnosing means diagnoses that the water supply is excessive, if the output voltage (Vtmin) of said lowest temperature individual cell is lower than the output voltage (Vtmax) of said highest temperature individual cell and (Vtmin) is smaller than (Vesl) defined when said water supply is reasonable.

13. (Previously Presented) The fuel cell control system according to claim 11, wherein said diagnosing means diagnoses that the water supply is insufficient, if the output voltage (Vtmax) of said highest temperature individual cell is lower than the output voltage (Vtmin) of said lowest temperature individual cell and moreover (Vtmax) is smaller than (Vesh) defined when said water supply is reasonable.

14. (Previously Presented) The fuel cell control system according to claim 11, wherein said highest and lowest temperature individual cells are selected among those which are provided with said temperature measuring means.

15. (Previously Presented) The fuel cell control system according to claim 11, wherein said highest and lowest temperature individual cells are selected by an interpolation on the basis of measured temperatures of said part of said individual cells.

16. (Previously Presented) A fuel cell control system for controlling a fuel cell stack constructed by a plurality of individual cells each of which generates an electric power by an electrochemical reaction of hydrogen and oxygen, said fuel cell control system comprising:

output voltage measuring means for measuring output voltages of all or a part of said individual cells; and

diagnosing means for diagnosing said fuel cell stack on the basis of the measured output voltages and their statistics, and for diagnosing at least whether or not an amount of water involved in said fuel cell stack is excessive based on said output voltage and an average voltage of said output voltages; wherein:

said operation of said fuel cell control system is controlled according to said diagnosis result of said diagnosing means,

when said diagnosis result of said diagnosing means indicates that said amount of water involved in said fuel cell stack is excessive, a supply pressure of said hydrogen as a fuel gas to be supplied to said fuel cell stack is relatively increased to a supply pressure of said oxygen as an oxidizing gas, and

when said diagnosis result of said diagnosing means indicates that said amount of water involved in said fuel cell stack is insufficient, said supply pressure of said fuel gas to be supplied to said fuel cell stack is relatively decreased to said supply pressure of said oxidizing gas.

17. (Previously Presented) The fuel cell control system according to claim 16, further comprising a humidifier that humidifies said oxidizing gas to be supplied to said fuel cell stack,

wherein when said diagnosis result of said diagnosing means indicates that said water involved in said fuel cell stack is excessive, said humidifier ceases to humidify said oxidizing gas, and

when said diagnosis result of said diagnosing means indicates that said water involved in said fuel cell stack is insufficient, said humidifier increases an amount of humidification to said oxidizing gas.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) A fuel cell control system for controlling a fuel cell stack constructed by a plurality of individual cells each of which generates an electric power by an electrochemical reaction of hydrogen and oxygen, said fuel cell control system comprising:

output voltage measuring means for measuring output voltages of all or a part of said individual cells; and

diagnosing means for diagnosing said fuel cell stack on the basis of the measured output voltages and their statistics, and for diagnosing at least whether or not an amount of water involved in said fuel cell stack is excessive based on said output voltage and an average voltage of said output voltages; wherein:

said operation of said fuel cell control system is controlled according to said diagnosis result of said diagnosing means,

said diagnosing means diagnoses whether or not a supply pressure of said hydrogen as a fuel gas to be supplied to said fuel cell stack is insufficient,

when a diagnosis result of said diagnosing means indicates that said supply pressure of said fuel gas to be supplied to said fuel cell stack is insufficient, the fuel cell control system is controlled to increase said supply pressure of said fuel gas,

when said diagnosis result of said diagnosing means indicates that said water involved in said fuel cell stack is excessive, a supply pressure of said hydrogen as a fuel gas to be supplied to said fuel cell stack is relatively increased to a supply pressure of said oxygen as an oxidizing gas to be supplied to said fuel cell stack, and

when said diagnosis result of said diagnosing means indicates that said water involved in said fuel cell stack is insufficient, said supply pressure of said fuel gas to be supplied to said fuel cell stack is relatively decreased to said supply pressure of said oxidizing gas.

21. (Previously Presented) The fuel cell control system according to claim 20, further comprising a humidifier that humidifies said oxidizing gas to be supplied to said fuel cell stack,

wherein when said diagnosis result of said diagnosing means indicates that said water involved in said fuel cell stack is excessive, said humidifier ceases to humidify said oxidizing gas, and

when said diagnosis result of said diagnosing means indicates that said water involved in said fuel cell stack is insufficient, said humidifier increases an amount of humidification to said oxidizing gas.

22. (Currently Amended) The fuel cell control system according to claim 1, further ~~comprising:~~comprising a fuel line joined between a hydrogen cylinder for storing hydrogen and said fuel cell stack, and a recycle line joined between a downstream side of said fuel cell stack and a middle point of said fuel line, wherein through said recycle line, reacted gas including residual non-reacted hydrogen exhausted from said fuel cell stack is mixed with the hydrogen supplied from the hydrogen cylinder, and said mixed hydrogen gas is supplied to said fuel cell stack.

~~a fuel introduction line through which said hydrogen is supplied into said fuel cell stack; and~~

~~a fuel exhaust line through which said hydrogen is exhausted,~~

~~wherein said hydrogen that is exhausted is not electrochemically reacted with said oxygen,~~

~~wherein said fuel exhaust line is joined to the fuel introduction line.~~